D H E C

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Promoting and protecting the health of the public and the environment.

April 20, 2005

Mr. James I. Palmer, Jr., Regional Administrator
United States Environmental Protection Agency Region 4
Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, GA 30303-8909

Re: SC's December 2004 Early Action Compact SIP Submittal

Dear Mr. Palmer:

Attached please find clarifying supplemental information to the South Carolina Department of Health and Environmental Control's (SCDHEC) December 29, 2004 submittal of the South Carolina State Implementation Plan Revision – Early Action Compact. The Early Action Compact (EAC) process has been unprecedented in the Air program. It has opened the door to opportunities that have never before occurred as a part of the ozone attainment process. We appreciate the United States Environmental Protection Agency's continued support of EACs and for helping bring cleaner air sooner to South Carolinians.

The attached document demonstrates the continued commitment of the participants in the EAC process including counties, agencies, universities, organizations, businesses, industries and environmental groups. As you can see, actions speak louder than words. This whole effort in South Carolina has been, and continues to be, a marvelous example of partnerships in many directions. It is amazing to see the diverse parties coming together for a worthy common goal.

Should you or your staff have any questions or need additional information, please do not hesitate to contact me at (803) 896-8940 or Myra Reece, Chief of the Bureau of Air Quality at (803) 898-4123.

Sincerely,

Robert W. King, Jr. P.E.
Deputy Commissioner
Environmental Quality Control

Enclosures

Cc: Beverly Banister, EPA Region 4 (letter only)
Kay Prince, EPA Region 4 (w/ attachments)
Myra Reece, BAQ (letter only)
Renee Shealy, BAQ (letter only)
David Farren, SELC

South Carolina's Ozone Early Action Compact

Clarifying and Supplemental Information to the December, 2004 EAC State Implementation Plan Submittal

Enclosures

April 20, 2005 Submittal

1. EAC Clarification and Supplemental Information Document
2. Draft Language for Maintenance Plan "Triggers"
3. SC's EAC Milestones and Reporting Tracking Document
4. Comparison Between EACs and Federal Requirements

South Carolina's Ozone Early Action Compact
Clarifying and Supplemental Information to the December, 2004 EAC State Implementation Plan Submittal
April 20, 2005

The Early Action Compact (EAC) process is unprecedented in the Air Program and the United States Environmental Protection Agency's continued support is appreciated. It has opened the door for partnerships for beneficial air quality measures that have never before occurred. This statewide effort has greatly increased the awareness of local officials about air quality issues and has resulted in proactive, voluntary and mandatory actions that would not have occurred without the EAC process. Thousands of people across the State are now more aware of the impact they have on air quality and the importance and benefits of improving air quality. Further, numerous individuals have dedicated much of their time and resources to making the EACs a success. This success has helped build support and partnerships for future Air Program efforts.

The most important result of the South Carolina EAC process is the quantifiable emissions reductions and real air quality improvements obtained by people across the State who are committed to the process, rather than just meeting prescriptive requirements. This is why the South Carolina Wildlife Federation honored the "South Carolina Department of Health and Environmental Control Early Action Compact State Implementation Plan" with their 2005 South Carolina Wildlife Federation Air Conservation Award, an award that has only been bestowed six times since 1970.

As mentioned above, partnership development has been, and continues to be a very important result of the EAC process. For example, when the EAC process began, the focus was on signing up local or county governments that would have authority to implement strategies and also to lead by example. However, as the process has been implemented, the stakeholder group has expanded to include the individual areas, plus the Clean Air initiatives for Government Entities (CAIGE), the Palmetto State Clean Fuels Coalition (the designated Clean Cities Coalition), as well as environmental groups, industries, businesses, and citizens. Hence, there are strategies and activities being implemented that are well beyond those governed by the state or local government, thus demonstrating how far-reaching an effort can be when partnerships, outreach, and support are developed with very limited resources.

This activity at the local level far exceeds the resources and budget available to the South Carolina Department of Health and Environmental Control (SCDHEC). This is a very good example of the capacity building that has occurred throughout the EAC process as it has resulted in an increased amount of activity of awareness events coordinated locally. The initiation of awareness activities through local contacts and their efforts, with SCDHEC as a technical resource, is a huge step towards improved and more meaningful education and outreach efforts throughout the state, but especially in the deferred non-attainment areas of South Carolina.

While air quality modeling shows attainment and continued maintenance through 2017 without any of the state or local measures described herein, future design values developed through modeling for 2007, 2012 and 2017 are below 84 ppb at all monitors across the State. The EAC protocol only requires demonstration of maintenance through 2012; however, South Carolina has demonstrated maintenance of the standard through 2017.

The Results of the EAC Process To Date

Statewide Regulations

The EAC process resulted in the promulgation of one new statewide regulation to control nitrogen oxides (NOx) from stationary sources. In addition, the existing open burning regulation was revised to add more stringent restrictions.

The Control of Oxides of Nitrogen (NOx) Regulation (R.61-62.5, Standard 5.2), while not needed to demonstrate attainment, will help ensure the areas attain and maintain the 8-hour ozone standard. It is important to note that the regulatory and voluntary efforts as a result of the EAC effort are more beneficial to air quality than transportation conformity and nonattainment New Source Review (NSR), as these are not "control" programs. For example, the Control of NOx Regulation results in Prevention of Significant Deterioration (PSD) level controls (Best Available Control Technology) on sources that otherwise would not be subject to any control. Under the Clean Air Act requirements, nonattainment NSR would apply only to sources with emissions of 100 tons per year or more and new emissions would be offset, but not decreased, as the deferred areas would be subject to the nonattainment provisions in Subpart 1 of the Clean Air Act. (Subpart 1 requires total tonnage of increased emissions to be offset by an equal or greater reduction.) Further, it is rare for a new major source to locate in a nonattainment area, with most nonattainment areas permitting no new sources. Rather the sources locate in attainment counties just outside the nonattainment area thereby contributing to sprawl. As the Control of NOx Regulation is a statewide regulation, all sources are subject to these stringent levels thus eliminating any contribution to sprawl.

It is important to note that local officials and industrial leaders supported the Control of NOx Regulation and amendments to the open burning regulation in good faith. If the South Carolina EAC State Implementation Plan (SIP) is not approved, local leadership could lobby for the Legislature to overturn these statewide regulatory efforts that have occurred as a direct result of the EAC process.

Control of NOx Regulation – This is a very broad regulation that applies statewide to any stationary source that emits NOx generated from fuel combustion. The regulation is primarily targeted at smaller sources that would otherwise not be required to control NOx emissions. Larger sources that have undergone a BACT review for NOx are exempt from the regulation; however, larger sources that have taken limits to opt out of a PSD review will still be required to comply with this regulation which covers sources ranging from boilers and turbines to fluidized bed combustors and lime kilns. New sources are required

to install controls that are on par with BACT. All controls were based on BACT limits found in the RACT/BACT/LAER Clearinghouse (RBLC). This regulation also requires existing sources, when replacing a burner, to replace it with a low NOx burner or equivalent technology capable of achieving a 30% reduction from uncontrolled levels.

With respect to anticipated reductions, our estimates (see Appendix 13 of the December 2004 EAC SIP) are that, when fully implemented, the regulation will result in NOx reductions of approximately 2,914 tons. Appendix 13 of the December 2004 EAC SIP provides a comprehensive listing of 828 stationary fuel combustion units in the state that are potentially subject to the regulation. Staff have reviewed each applicable unit to determine whether or not the unit already has NOx controls that would exempt it from the regulation. If subject to the regulation, then an estimate based on a 30% reduction from uncontrolled levels is assumed. Furthermore, Appendix 13 of the December 2004 EAC SIP provides estimates on the amount of reductions that the controls specified in the regulation for new sources will achieve. For instance, natural gas fired boilers of 50 mmBTU/hr will be required to install low NOx burners or equivalent technology capable of achieving 30ppmv @3% 0_2 dry (0.036 lb/mmBTU). This is equivalent to a 50% reduction from uncontrolled levels and it should be noted that in absence of these regulations, these sources might otherwise not be required to install NOx controls.

Open Burning Regulation – This regulation was revised as part of the EAC process to help achieve additional NOx reductions. A couple of the more controversial revisions that were made to this regulation include the prohibition on the burning of construction waste and the deletion of the exemption for household trash where other disposal options are not available (thus completely banning the burning of household waste). Aside from the expected NOx reductions, these revisions will help the SCDHEC in other respects. The burning of household trash and construction waste presents health and environmental concerns for many communities. The smoke generated from these activities is a nuisance to some and a health threat to those with asthma or other respiratory problems. The revisions that were made to this regulation will ban the burning of commercial construction waste entirely and the burning of residential construction waste (waste associated with the construction of one and two family dwellings) will only be allowed outside of the ozone season and only if it meets other stringent requirements (i.e. only clean wood products, etc.).

With respect to the NOx reductions anticipated to result from these amendments, the SCDHEC was only able to estimate with any certainty those reductions expected from the ban on the burning of residential construction waste. There are no resources available to develop the expected reductions from the ban on burning commercial construction waste and household trash. The estimated NOx reductions from the ban on residential construction waste are outlined in Appendix 16 of the December 2004 EAC SIP. For Greenville, Anderson, Spartanburg, Richland and Lexington counties it is estimated that this regulation will reduce NOx emissions by approximately 50 tons per year and Volatile Organic Compounds (VOCs) by 228 tons per year.

Smart Highways - An Innovation as the Result of the EAC Process

Smart Highways is an effort through the EAC process to address transportation planning and any impact transportation might have on air quality. As a result of this effort, each of the four Metropolitan Planning Organizations (MPOs) in deferred nonattainment areas (Greenville, Anderson, Spartanburg, Richland and Lexington counties) is currently completing its long-range transportation plan. Preliminary indications are that federal requirements (Tier II/low sulfur) coupled with transportation improvements to the respective networks will result in approvable long-range plans. For example, in Greenville County between the years of 2002 and 2007 the emission reductions are modeled to be approximately 3,151 tons/year for NOx and 2,054 for VOC. The out years beyond 2007 are even greater. Preliminary work indicates similar results are expected for the other areas.

For Smart Highways, a baseline year of 2002 has been established for each of the deferred areas, as were horizon years of 2007 and 2025/2030. Using travel demand data, interim budgets will be established as guides for determining the adequacy of transportation projects. While long-term transportation planning was already a normal part of each areas process, developing actual emission totals for air quality impact was not. Each of the MPO's has incorporated the Smart Highways process into their planning commitments.

This approach is not a requirement of the EAC and is not being done in any other EAC area in the country. It is an example of the commitment by air quality and transportation agencies at the local, state, and federal level. It also acts as the basis for a back up plan should the EAC process be denied. In addition, South Carolina already has in place the necessary consultation procedures to address traditional transportation conformity requirements for all pollutants in any nonattainment area. Again, this initiative is something no other state has accomplished.

Comprehensive Maintenance Plan

South Carolina has committed to a comprehensive maintenance plan. This commitment exceeds the maintenance plan requirements in the EAC protocol. The South Carolina EAC maintenance plan is similar to the requirements for section 175A of the Clean Air Act, none of which are required for EAC areas. The South Carolina EAC SIP submittal provides: a time line of actions and submittals for the maintenance plan from December 2004 to December 2027; the commitment to develop a maintenance plan for a second 10-year period, 2017-2027; a schedule involving emission inventory and air quality modeling which are not required by EAC protocol; an EAC Plan update in 2015; annual tracking of stationary and highway mobile source emissions; and, a commitment to adopt and implement additional control measures, if needed, based on the results of analyses. (See Executive Summary, Section E.2 of the December 2004 EAC SIP.)

As a result of continued discussions with stakeholders in the EAC process, SCDHEC has determined that it would be appropriate to pursue "triggers" as a part of the

comprehensive maintenance plan. This action will require that SIP public notice and public hearing process be followed. A Notice of General Public Interest is planned for publication in the *State Register on May 27, 2005* scheduling a thirty-day public notice and comment period and scheduling a public hearing. A draft of the Notice is attached.

Stationary Source Reductions

As a part of their commitment to the EAC process, these facilities are voluntarily revising their permits to incorporate the following requirements as federally enforceable permit limits. These actions are permanent and quantifiable and would not have occurred had it not been for the EAC process. (See Executive Summary, Section D.4. and Appendix 10 of the December 2004 EAC SIP.)

- **Duke Power, Lee Steam Station (Anderson County)** – will install and operate advanced low NOx combustion controls on the smaller two coal-fired boilers (Units 1 and 2). The NOx limits on these units will be incorporated in the Title V permits and incorporated into the SIP. This is a $7 million investment that will limit NOx emissions to a rate of 0.27lbs/MMBtu ***(approximate reduction of 850 tpy annually).***
- **SCE & G: Wateree (Richland County)** agreed to take Title V permit limits on coil fired boilers subject to the NOx Call Requirements.
- **Transcontinental Gas Pipeline Corporation (TransCo) (Spartanburg County)** - IC Engine Facility will begin early implementation, fully implemented by December 2005, of NOx emission reductions required by the Phase II of NOx SIP Call.
- **International Paper – Eastover (Richland County)** agreed to take a 1,000-tpy reduction in its permit limit.

New Tracking of Education and Outreach Activities as a Result of the EAC Process

While SCDHEC has not had the resources to track the education and outreach activities performed by non-Agency personnel in the recent past (i.e., no baseline data) to make comparisons, the EAC process has improved information regarding such activities. Because of the reporting requirements involved with the local participants towards meeting the EAC milestones, there have been numerous updates concerning outreach activities that have been initiated in the local areas. Material resources such as posters, brochures and radio and television Public Service Announcements (PSAs) developed by SCDHEC have been requested for use by these local contacts.

Ground-level Ozone Awareness Week Activities:

Governor Mark Sanford proclaimed March 28 – April 1, 2005 as Ozone Awareness Week in South Carolina. The EAC areas have used the proclamation to launch their 2005 Ozone Awareness efforts. Some of these efforts include:

- *The State* newspaper (Richland and Lexington Counties) ran an article recognizing Richland County staff's effort to promote Ground-level Ozone Awareness Week, their work to provide alternative fuel for county flex-fuel vehicles and the link of their county webpage for the SCDHEC ozone forecast.
- Richland County staff sent out a press release (03/25/05) to promote Ground-level Ozone Awareness Week and provided additional information on their webpage: www.rcgov.us. An email was sent (03/29/05) to almost 900 county employees promoting the week.
- Lexington County EAC contact distributed (03/23/05) Ground-level Ozone Awareness information in paychecks to 1300 employees.
- Anderson County staff sent out a news release (03/28/05) on Ground-level Ozone Awareness Week and promoted this week on a local radio station, WRIX 103.1FM. An article on Ground-level Ozone was also placed on their county webpage: www.andersoncountysc.org.
- SCDHEC staff provided interviews on Ground-level Ozone Awareness Week to two radio stations: News Talk for Charleston 1250AM (03/29/05) and Columbia WVOC 560AM (03/30/05).
- SCDHEC staff provided an interview for WIS-TV in Columbia for Ground-level Ozone Awareness Week. Information may be found at this link: http://www.wistv.com/Global/story.asp?S=3132984&nav=0RaMXyjF.
- The Charleston County Administrator sent an email (03/28/05) to county employees regarding Ground-level Ozone Awareness Week and staff set up a display in their Public Services Building to provide more information.
- Laurens County EAC contact distributed (03/22/05) news release to two local newspapers, and included tips on cleaner air fact sheet and the Governor's proclamation for Ground-level Ozone Awareness Week. Similar package of information distributed to 300 county employees.
- The York County EAC contact worked with the York County Council to declare March 28-April 1, Ground-level Ozone Awareness Week. Ground-level Ozone Awareness bookmarks were to be mailed out, along with the county council agenda, to 300 citizens.

The following includes materials that were requested by the EAC areas:

County/COG	Item	Number
Chester	Spare the Air – paycheck inclusions	250
Cherokee	Ozone and Your Health	50
Greenville	Ozone and Your Health	200
	Learn Before You Burn	200
	Coloring Books – Spare the Air	100
	Pencils	150
	PDF of Display	1
	Air PSA	1
Charleston	Learn Before You Burn	200

Georgetown	Air is Everywhere Posters	5
Lexington	Air PSA	6
Anderson	Air PSA	1
Spartanburg	Air PSA	1
Appalachian COG	Air PSA	1
Richland	Air PSA	1
Central Midlands COG	Air PSA	1
York	Air PSA	1
Catawba	Air PSA	1
Abbeville	Air PSA	1
Abbeville	Ozone and Your Health (for Paycheck)	200
Allendale	Ozone and Your Health	200
York	Learn Before You Burn	500
	Gas Can Exchange Brochures	100
Aiken	Ozone and Your Health	100
	Coloring Books – Spare the Air	450
	CO2 Brochures	150
	Driving Smarter	450
	Learn Before You Burn	150
	Learn Before You Burn Spanish	100
	Pencils	1 Box (500)
Pickens	Notepads	25
	Pencils	25
	Air Fresheners	25
	Ozone Posters	25
	Care About Air coloring books	25

All counties received:

Coloring Book
Bookmarks (*It All Adds Up To Cleaner Air*)
Posters (*Ozone, Air is Everywhere, Good Up High*)
Ozone and Your Health Brochure and Electronic Version
Instructions to link to the SCDHEC Bureau of Air Quality website
Note Pad
Pencil
Information on EPA website
Draft Press Release
Electronic Version of Proclamation
25 Things To Improve Air Quality flyer and Electronic Version

SCDHEC contributions:

Letters and 2,000 posters to doctors' offices statewide regarding ozone
Distributing 5,000 flyers in paychecks
Press releases
E-mail about Ozone and Proclamation sent to Air Program staff

School-related educational activities by location:

- Earth Fair Irmo, (Saluda Shoals, Lexington), exhibit for state wide Earth Fair, May 7th, 2005
- Crossroads Middle School (Lexington County), Education and Outreach support, environmental school project for SCDHEC pilot program, Dec. 2004-present, air pollution reduction program
- Pine Grove Elem. School (Richland), presentation for Science Day, Feb. 2005
- Forest Heights Elem. School (Richland), presentation for Science Day, April 15, 2005
- Sanders Middle School (Richland County), Education and Outreach support, October 2004-March 2005
- Provide approximately 100 "Driving Smarter" brochures every other month to be placed at the Richland County Administration building.
- Berry Shoals Elem. School, (Spartanburg), educational materials, Special science awards, March 2005
- Museum of York County (York County), exhibit, Earth Day Birthday, April 30th
- Rawlinson Road Middle School (York County), Education and Outreach support, environmental school project through the South Carolina Department of Education, 2002-present, focus on air pollution reduction strategies

CAIGE (Clean Air Initiatives for Government Entities) Workgroup

- Richland County has requested air quality articles for use in their staff newsletter and information regarding the EPA *Energy Star* Power Management program to share with county administration.
- A staff person from the South Carolina Department of Transportation (SCDOT) has been designated to receive SCDHEC's Ground-level Ozone Forecast and to distribute it via e-mail to approximately 5,000 staff. SCDOT is also planning to utilize the SCDHEC Ozone Forecast Internet link for the forecast on their webpage. SCDOT roadside emergency signs in the Upstate and Midlands will be utilized for Ground-level Ozone Action Alerts. The number of signs by county is: Anderson (1), Greenville (5), Spartanburg (7), Oconee (1), Richland (5), Lexington (2), and Orangeburg (10).
- The South Carolina State Energy Office will implement "Take a Break from the Exhaust" in their office during the 2005 Ozone Season.

EAC Reinforcement of Planning Initiatives at the Local Level

The EAC process has allowed contact with counties at a critical time in their comprehensive planning process. Many are in the midst of updating their 5 and 10-year plans. The dates for completing these do not coincide with EAC dates but improving air quality does not have a "sunset" provision. Many counties have already begun or completed changes to their land use plans that reduce sprawl and traffic congestion.

Anderson County

Highlights of the Anderson County Land Use and Development Standards include items that develop standards with respect to landscaping and open space, promote public health and safety through the reduction of noise pollution, storm water runoff and air pollution. Also included are development standards with "Greenways" defined which link residential areas with other open space areas. These greenways may contain bicycle paths, footpaths, and bridle paths. Additionally, intensity standards (designed principally to regulate land use in accordance with the design function and carrying capacity of the road on which it is located) are being developed.

Greenville County

Smart Growth America has said about the City of Greenville, "The city has the right idea about how communities should be designed." It has chosen Greenville as one of four cities and counties nationwide to work with to turn smart growth ideas into better development for Greenville. Efforts include spreading the kind of development happening downtown to its more suburban edges including more sidewalks, buildings closer to the street, smaller parking lots and more landscaping. A draft ordinance is planned for late spring, 2005.

Greenville County's Comprehensive Plan encourages the development of industrial parks so aesthetics, design, screening and land use impacts can be better managed. Plans are being worked on to revise the county Zoning Ordinance to create new residential zoning classifications that permit design innovations such as open space, varying setbacks, cluster development, varying lot sizes, and mixed uses with extensive landscaping. Through incentives, it would also encourage developers to build in the urban area of the county. Transit goals in the Comprehensive Plan encourage residents to use alternative modes of transportation for travel.

Greenville County Planning Commission, on behalf of the City of Mauldin and the City of Simpsonville, has retained Day Wilburn Associates to prepare a Transit Development Plan for the Mauldin-Simpsonville Urbanized Area. The study will identify feasible transit options for the area and will evaluate a limited-stop or express bus option that would target serve park and ride locations in the I-385 corridor, a major commuter route in the region. The study will be completed in July 2005. The first technical

memorandum has been produced, which evaluates transit needs and current services. The next phase of the study will identify service options and develop a financial plan.

Spartanburg County

Spartanburg County's land use efforts include strategies that are represented in the county's comprehensive plan or unified land management ordinance. Some important strategies include:

- Development of a comprehensive urban forestry plan to include local tree ordinances, protection policies of urban open spaces, and landscape ordinances that utilize native plants.

- Revisions of the county's subdivision regulations to include conservation provisions to help not only retain natural resources, but add to the value and marketability of rural residential projects. This will also maintain balance between the rural setting and future growth and development.

- Amending the county's subdivision regulations to promote cluster housing development in rural areas, thereby minimizing land coverage for residential use. Establishing maximum lot size (recommended 1/4 acre) for cluster subdivisions of a certain size, as opposed to minimum lot size, and allocating in perpetuity through lease, trust, common ownership, etc. up to 80 percent of such subdivisions to open, agricultural, or forested use, thus retaining rural, open character.

To address transit needs Spartanburg County is working to provide convenient, coordinated, accessible and affordable transit service under the administration of a single transit agency, controlled by a Joint Transit Commission appointed by city and county government. This includes interfacing the transit system with other transportation modes including highways, airports, rail, intercity bus, school buses, and bikeway/trail systems. Components of this approach include developing alternative funding sources to promote public transit as a low cost alternative to the automobile and as a means of lessening traffic congestion.

To promote bicycle and pedestrian facilities, a governmental committee composed of local officials whose mission is to promote alternative transportation systems in the county has been created. The committee is also responsible for the procurement of funding for the implementation of such facilities. Securing a public and private partnership to oversee the implementation of proposed improvements and promote the use of alternative transportation through educational, promotional and incentive programs is also being addressed.

Lexington County

On January 22, 2005, Lexington County Council received statewide recognition from the *South Carolina Wildlife Federation* for its landscape ordinance. The Federation's Forestry

award was in recognition of leadership and vision through comprehensive urban forestry programs recently implemented. Due to the variety of issues involved in a project of this magnitude, the county sought input from experts in landscaping and urban forestry as well as the public in developing the Ordinance. While the County's Ordinance is directed primarily at commercial development, it actually focuses on six different categories. The most important aspect of the *Lexington County Landscape Ordinance* is that its format enables it to be duplicated in any community regardless of location, political environment, or intensity of development. Air quality benefits of this ordinance are that it will help reduce emissions because of reduced use of gas powered yard equipment and the use of canopy trees in parking lots to cut down on evaporative emissions.

Components of the Lexington County Comprehensive Plan encourage the development of traffic-intensive commercial, industrial and higher density residential land uses near existing major roads, railroads and interstate highways. It discourages low-density residential development near existing major roads and interstate highways and encourages development patterns such that future growth can be effectively served by public transportation. It also provides for safe transportation facilities for bike and pedestrian usage and promotes the compatibility of different land uses as an alternative to completely segregating residential, commercial, industrial, agricultural and other uses from one another. Another effort includes working within the Central Midlands Council of Governments to ensure that the Columbia Area Transportation Plan (COATS) assists in the reversal of the "sprawl" development pattern.

Richland County

Effective July 1, 2005, Richland County will use a vastly updated Land Development Code (LDC) to address a number of issues that citizens have brought to the attention of the county over the years such as transportation, community appearance, conservation, water quality and affordable housing. The central reason for drafting the updated LDC was to revise the county's land development regulations as needed to make certain they accomplish the goals and objectives of the comprehensive plan.

Among its many purposes, the LDC specifies planning requirements that seek to "lessen congestion in the roads." For the first time, site plans for major land development must include a traffic management plan: "An evaluation of the effect of traffic generated by a development on the operation and safety of the adjacent public roads. Such analysis shall include an identification of traffic impact mitigation measures needed to improve the safety, operation, and flow of vehicular and pedestrian movement into and out of the development."

Richland County Council is sponsoring a neighborhood meeting on April 16, 2005, to share information on planning, design, and development of livable communities. Dr. Chuck Bohl, an internationally recognized expert on this topic is scheduled to speak.

Richland County has also contracted with the Palmetto Conservation Foundation (PCF) to address how land use, transportation, parks, and trails can be incorporated into a

greenway network that builds on the Three Rivers Greenway and Palmetto Trail and promote integrating physical activity into daily routines. The primary activities of focus are bicycle/pedestrian transportation, safe routes to school, and community planning. In combination with Bicycle/Pedestrian planning now underway at the Columbia Metropolitan Planning Organization, car commuters will have additional commuter options. PCF has already participated in a successful active living campaign in Spartanburg, South Carolina, which brings, in part, an air quality benefit that Columbia and Richland County want to emulate.

SCDHEC Efforts:

Greenscapes – SCDHEC partnered with the South Carolina State Budget and Control Board's (B&CB) Horticulture services to implement a tree planting and environmental landscape project at SCDHEC's central office and to conduct workshops on environmental benefits of trees for representatives of local and state government agencies. Funding for this effort was through a grant from the Urban and community Forestry Grant Assistance program administered through the South Carolina Forestry Commission and funded by the USDA Forest Service. Planting trees and reducing grass area results in less lawn mowing which helps reduce the emission of Nitrogen Oxides (NO_x) and Volatile Organic Compounds (VOC) from gas powered equipment. For example, this project decreased the mowing area by 39% (original turf area was 24,816 sq. ft.; new mulch area 9,684 sq. ft., new turf area 15,132 sq. ft.). The time to mow this area has been cut in half, to less than 45 minutes.

To assist in promoting the incorporation of landscape planning to support the health of the environment, each EAC contact has been invited to attend a presentation on May 25, 2005, to be provided by David J. Nowak, Ph.D. Dr. Nowak is a Project Leader with the USDA Forest Service, Northeastern Research Station in Syracuse, NY. Dr. Nowak is a principal scientist on the Chicago Urban Forest Climate Project and is a recipient of the American Forests Urban Forest Medal recognizing outstanding national contributions in urban forest research and the Distinguished Science Award of the Northeastern Research Station. His presentation is designed to provide an understanding of urban forests and their benefits and regulatory effects related to air and water quality.

Enhanced Mobile Source Activities

Alternative Fuel Vehicles (AFVs) and Infrastructure, Hybrid Vehicles and Other Mobile Source Activities

Anderson County

There were 1,520 gallons of biodiesel purchased in 2004 in Anderson County. There are approximately 109 alternative fuel vehicles operating within federal, state, county, and municipal government. Of that amount 37 belong to the county. As directed by the County Administrator all future purchases will be either Hybrids or AFVs, if practicable.

Currently there are no ethanol refueling facilities in Anderson County but plans call for the construction of one by the end of 2005.

A Truck Stop Electrification Project resulted in 51 spaces at a truck stop in Anderson County being outfitted with Idle Aire Technology.

A School Bus Retrofit Project will result in 23 diesel school buses being retrofitted with particulate filters in 2006.

Greenville County

There were 2,700 gallons of biodiesel purchased in 2004 in Greenville County. The county government currently operates 56 alternative fuel vehicles (ethanol). This is an increase of 19 vehicles since November 2004. In addition, the County Administrator has directed that all future purchases will be either Hybrids or AFVs, if practicable. There are approximately 122 alternative fuel vehicles operating within federal, state, county, and municipal government.

On April 22, 2005, there will be a grand opening of the first ethanol-refueling station within the county that will be open to the general public. There are plans for one more location by the end of 2005. The opening of this station was made possible by efforts of the Palmetto States Clean Fuel Coalition and its local members.

Michelin North America located in Greenville County has applied for special projects funding to add biodiesel at their test track (Laurens Proving Grounds). Biodiesel would be used in test vehicles and would be available to others using the test facility. There is the possibility for expanding fuel use throughout their fleet. The project would begin December 2005. The Laurens Proving Grounds operates 12 to 14 diesel-powered vehicles for the purposes of 1) testing tires, 2) maintaining the 3000-acre site, and 3) transporting test tires to and from the site.

A School Bus Retrofit Project will result in 47 diesel school buses being retrofitted with particulate filters in 2006.

Spartanburg County

There are approximately 70 alternative fuel vehicles operating within federal, state, county, and municipal government. Of that amount 16 belong to the county. As directed by the County Administrator all future purchases will be either Hybrids or AFVs, if practicable.

On April 22, 2005, there will be a grand opening of the first ethanol-refueling station within the county open to the general public. There are plans for one more location by the end of 2005. The opening of this station was made possible by efforts of the Palmetto States Clean Fuel Coalition and its local members.

A School Bus Retrofit Project will result in 20 diesel school buses being retrofitted with particulate filters in 2006.

Lexington County

There were 1,120 gallons of biodiesel purchased in 2004 in Lexington County. There are approximately 60 alternative fuel vehicles operating within federal, state, county, and municipal government. Of that amount 11 belong to the county. As directed by the County Administrator all future purchases will be either Hybrids or AFVs, if practicable.

By December 2005, Schwan's Home Service, Inc. will convert 11 heavy-duty trucks from gasoline to propane and it is anticipated that the converted trucks will be located at their depot in Lexington. In addition, propane fueled trucks from Augusta, Georgia and Monroe, North Carolina service customers in South Carolina. Schwan's current South Carolina fleet of 67 trucks located at depots in Greenville, Lexington, Charleston and Florence is 60 percent propane fueled.

A School Bus Retrofit Project will result in 28 diesel school buses being retrofitted with particulate filters in 2006.

Richland County

There were 1,815 gallons of biodiesel purchased and 38,020 gallons of ethanol purchased in 2004 in Richland County. There are approximately 745 alternative fuel vehicles operating within federal, state, county, and municipal government. Of that amount 12 belong to the county. They currently have 3 on order and as directed by the County Administrator future purchases will be either Hybrids or AFVs, if practicable.

On April 13, 2005, there will be a grand opening of 2 ethanol-refueling stations within the Richland County available to the public. There were two constructed in 2004. The opening of these stations was made possible by efforts of the Palmetto States Clean Fuel Coalition and its local members.

Additional plans call for Fort Jackson to open an ethanol-refueling station on their base in 2005 that will be used to refuel military equipment. They currently operate 65 alternative fuel vehicles.

The University of South Carolina (USC) is using biodiesel for the campus shuttle buses to reduce exhaust fumes and pollution on campus. In November 2004, USC was fueling four 40 passenger and four 35 passenger buses with biodiesel. Each bus uses approximately 25-30 gallons per day. The State Energy Office has assisted (USC) purchase the biodiesel through a grant to "buy down" the rate of biodiesel to the rate of regular diesel. Also, USC was awarded a Clean Cities Infrastructure Grant to install E85 fueling infrastructure. The facility will be operational by October 2006. USC currently has 76 Flex Fuel Vehicles. These vehicles will use E85 exclusively. It is estimated that this will displace 43,000 gallons of gasoline annually.

On October 13, 2004, Richland County Government published an ambitious administrative directive to increase the purchase of alternative fuel vehicles, the purpose being to significantly improve air quality in the region and to decrease County dependence on the less desirable petroleum. Conversion of the current fleet of 400 vehicles (excludes emergency and heavy-duty) has begun with the budgeting of twenty-four alternative fuel vehicles in FY2006. By purchasing at this level each year for five years, the County will reach the goal of 120 AFVs (30%) by the year 2010. Administration has also issued a policy directive requiring all vehicle purchases to be approved by the County Fleet Manager. By staying current on available AFV models, the County will make better decisions on vehicle orders, insuring maximum participation in this directive.

Richland County is applying for a grant to purchase ethanol (E85) infrastructure. The infrastructure (8,000 gallon double walled E85 fuel tank) is proposed for the Powell Road site (Department of Public Works). Richland County staff have met with staff from their local Clean Cities partner and the South Carolina Energy Office to discuss the location of this fueling site.

The Central Midlands Regional Transit Authority (CMRTA) currently operates seven Compressed Natural Gas (CNG) buses. The remaining vehicles operated by the CMRTA use new technology-clean diesel. The CMRTA purchased the CNG vehicles to test them against similar diesel-powered buses. CMRTA used 60,031gallons of CNG during 2004.

A School Bus Retrofit Project will result in 21 diesel school buses being retrofitted with particulate filters in 2006.

Mass Transit

In October 2003, the South Carolina Department of Transportation (SCDOT) conducted the SmartRide Research Project. For four weeks, the SCDOT provided commuter-focused transit service and gathered information regarding the use of alternative forms of transportation. The project was a temporary mass transit service that focused on the needs, concerns and preferences of working commuters. Between October 6th and October 31st, the SmartRide Research Project served an average of 68 riders daily and provided a total of 2,730 passenger trips to and from work. The Smart Ride Research Project represents a strategy that can potentially improve traffic congestion and air quality conditions in South Carolina. The effective utilization of an expanded network of commuter-focused transit operations could result in the reduction of vehicle miles traveled each year.

As a result of the SmartRide Research Project, in June 2004, "SMARTRIDE" returned to the Central Midlands area and continues today. Santee Wateree Regional Transportation Authority began commuter service originating from Camden to the Columbia area and the Central Midlands Regional Transportation Authority began commuter service from the City of Newberry with stops in Little Mountain and Chapin and then on to Columbia.

The development of similar "SMARTRIDE" projects in other areas of the State is anticipated.

Regional and Statewide Mobile Source Efforts

The South Carolina Department of Education, Office of Transportation (SCDOE) is working to purchase two hybrid electric school buses. South Carolina has been working with the Hybrid Electric School Bus Advisory Group, a group representing purchasers, manufacturers, and other stakeholders in school bus operation to initiate standards to be used in the development and construction of hybrid electric school buses. The funding from South Carolina will be combined with funding from more than eight other states to provide a "Group Bid" on the manufacture of approximately 20 school buses. This is a project that has the potential to impact millions of gallons of petroleum imports, reduce school bus operational and maintenance costs, improve ambient air quality for South Carolina, and improve air quality inside buses. SCDOE is applying for special projects funding and the goal will be to locate the buses in ozone nonattainment areas.

In Lexington and Richland Counties the Central Midlands Regional Transit Authority used 60,031 gallons of Compressed Natural Gas (CNG) in 2004. The South Carolina State Fleet used 1,248 gallons and other fleets used 497 gallons from the Flora Street station in Columbia.

On March 25, 2005, WIS-TV in Columbia aired a feature story highlighting alternative fueled vehicles. The story specifically covered the actions that SCDHEC and local government were taking to utilize alternative fuels.

Members of the Upstate EAC counties (Anderson, Greenville, and Spartanburg) in coordination with the Palmetto State Clean Fuels Coalition and the South Carolina Chapter of the Sierra Club, are working on statewide legislation that will provide tax incentives for purchase of alternative fuel and hybrid-propulsion vehicles and help reduce costs and provide tax credits for production and infrastructure for alternative fuels. The goal is to have it introduced to South Carolina General Assembly during the 2005 legislative session.

"Take a Break from the Exhaust" (TABFTE) project was developed by SCDHEC to reduce emissions from mobile sources, such as cars and trucks; increase awareness of the impact of mobile sources on air quality, and encourage the public to take voluntary actions to help improve air quality. This project was awarded the *Governor's 2003 Pollution Prevention Award for State Agencies*. The project's software tracking tool was important in supporting the Bureau's application to participate in the U.S.EPA and U.S. Department of Transportation's *Best Workplace for Commuters* voluntary program. Currently, SCDHEC's Bureau of Air Quality is the only *Best Workplace for Commuters* in South Carolina to receive this recognition.

- On Friday, April 15, 2005, The State newspaper wrote a story on one TABFTE partner and his decision to give up his car for a bike and public transportation.

This generated interest in more bike and pedestrian paths and public transportation in the Columbia area.

SCDHEC's Bureau of Air Quality received EPA funding to implement the *Energy Star* program for computer monitors in the Bureau (~150 machines) and plans to expand to other Bureaus within the Agency in the near future. *Energy Star* has been promoted through the CAIGE (Clean Air Initiatives for Governmental Entities) and a number of State Agencies have expressed interest in participating. SCDHEC is promoting *Energy Star* with interested EAC contacts.

Annual Tracking for Growth

The EAC requires the following elements be tracked in order to ensure that the standard is maintained:

1. An annual review of growth (especially highway mobile and stationary point source) to ensure emission reduction strategies and growth assumptions are adequate;
2. Identification and quantification of federal, state, and/or local measures indicating sufficient reductions to offset growth estimates.

Stationary Point Sources

To meet the annual review of growth of stationary point sources, the Department will do the following analysis. The obligation to conduct these analyses and, where indicated, adopt and implement additional control measures based on the result of the analyses, lasts throughout the maintenance period (2027).

Beginning with the December 2005 biannual progress report, every year the Department will evaluate the most recent annual stationary source emission inventory completed by the Department. The stationary point source emission inventory for NOx will be compared to the 1998 annual inventory used in the air quality modeling analyses for the attainment demonstration.

Action Trigger:

If, after December 2008, the actual stationary source NOx emissions are greater than 10 percent higher than those emissions used in the modeling analysis for the deferred nonattainment area and there has also been a corresponding increase in the ozone levels in the area such that the latest 3 year design value is greater than 0.084 ppm, the Department will analyze the data and then implement additional controls as necessary on stationary sources sufficient to offset the growth in stationary source NOx emissions. The analysis may involve additional modeling runs before control measures are adopted. Any additional rules would be effective as soon as practicable, but no later than three years of the finding that emissions growth were exceeding those used in the air quality modeling analyses. Any voluntary measures would be effective as soon as practicable, but no later than one year of the finding that emissions growth or growth rates were exceeding those used in the air quality modeling analyses.

Highway Mobile Sources

To meet the annual review of growth in highway mobile sources, the Department will do the following analyses:

Beginning with the December 2005 biannual progress report, each year the Department will evaluate the most recent annual vehicle miles traveled (VMT) data available. The actual annual growth rate from 1998 will be compared to the average annual growth rate used in the modeling analysis from 1998 through 2007.

Draft EAC Maintenance Plan "Triggers"
April 20, 2005

Action Trigger:

If, after December 2008, the VMT growth rate is greater than 10 percent higher than those emissions used in the modeling analysis for the deferred nonattainment area and there has also been a corresponding increase in the ozone levels in the area such that the latest 3 year design value is greater than 0.084 ppm, the Department will analyze the data and then implement additional controls as necessary and sufficient to offset the growth in VMT NOx emissions. The analysis may involve additional modeling runs before control measures are adopted. Any additional rules would be effective as soon as practicable, but no later than three years of the finding that emissions growth were exceeding those used in the air quality modeling analyses. Any voluntary measures would be effective as soon as practicable, but no later than one year of the finding that emissions growth or growth rates were exceeding those used in the air quality modeling analyses.

SCDHEC - Tracking for 8-hour Ozone EAC SIP – April 2005

	DATE	MILESTONE	STATUS	RESPONSIBILITY
	December 31, 2002	**1. EAC signed by all parties and submitted to EPA**	**45 counties entered into EAC's with the Department and EPA. Three separate submittals to EPA were made on: December 20, 2002; December 27, 2002; and, December 31, 2002.**	**Local Areas SCDHEC EPA**
Early Action Compact (EAC) II.B.2.	December 31, 2002	2. Initial mo eling emissions inventory completed	This was addressed in correspondence to Mr. J.I. Palmer, Regional Administrator, EPA Region 4 on December 20, 2002.	SCDHEC
EAC II.C.2.	December 31, 2002	3. Base case modeling completed	This was addressed in correspondence to Mr. J.I. Palmer, Regional Administrator, EPA Region 4 on December 20, 2002.	SCDHEC
EAC II.D.2.	**June 13, 2003**	**4. Discussion of control measures being considered to EPA**	**This was addressed in correspondence sent to Mr. J. I. Palmer, EPA Region 4 Administrator on June 13, 2003.**	**Local Areas SCDHEC**
EAC II.C.2.	October 31, 2003	5. Future case modeling	This was addressed in correspondence sent to Mr. J. I. Palmer, EPA Region 4 Administrator on December 19, 2003.	SCDHEC
EAC II.A.	December 2003	6. Progress report made available to EPA and public	This was addressed in correspondence sent to Mr. J. I. Palmer, EPA Region 4 Administrator on December 19, 2003.	Local Areas SCDHEC
EAC II.B.5.	December 31, 2003	7. Emission inventory comparison and analysis	This was addressed in correspondence sent to Mr. J. I. Palmer, EPA Region 4 Administrator on December 19, 2003.	SCDHEC
EAC II.C.2.	January 31, 2004	8. One or more modeled control cases (initial)	This was addressed in correspondence sent to Mr. J. I. Palmer, EPA Region 4 Administrator on March 31, 2004.	SCDHEC
EAC II.E.1.	January 31, 2004	9. Attainment maintenance analysis (initial)	This was addressed in correspondence sent to Mr. J. I. Palmer, EPA Region 4 Administrator on March 31, 2004.	SCDHEC
EAC II.B.3.	March 31, 2004	10. 2007 future year modeling emissions inventory	This was addressed in correspondence sent to Mr. J. I. Palmer, EPA Region 4 Administrator on March 31, 2004.	SCDHEC
EAC II.C.2.	March 31, 2004	11. Final revisions to one or more modeled control cases	This was addressed in correspondence sent to Mr. J. I. Palmer, EPA Region 4 Administrator on March 31, 2004.	SCDHEC

	DATE	MILESTONE	STATUS	RESPONSIBILITY
EAC II.E.1.	March 31, 2004	12. Final revisions to attainment maintenance analysis	This was addressed in correspondence sent to Mr. J. I. Palmer, EPA Region 4 Administrator on March 31, 2004.	SCDHEC
EAC III.	**March 31, 2004**	**13. Final local early action plan submitted to DHEC; copy to EPA**	**This was addressed in correspondence sent to Mr. J. I. Palmer, EPA Region 4 Administrator on March 31, 2004.**	**Local Areas SCDHEC**
EAC II.A.	June 2004	14. Progress report made available to EPA and public	This was addressed in correspondence sent to Mr. J. I. Palmer, EPA Region 4 Administrator on June 29, 2004.	Local Areas SCDHEC
EAC IV.9.	**December 31, 2004**	**15. Early Action State Implementation Plan submitted to EPA for incorporation into SIP**	**Draft EAC SIP submitted to EPA on October 22, 2004.** **Final EAC SIP submitted to EPA on December 29, 2004.**	**Local Areas SCDHEC**
EAC-SIP E.2. Page 43		16. Department prescribes that the EAC SIP covers not only the attainment demonstration through 2007, but also the first 10-year period of the maintenance plan, 2007-2017, including a mid-point evaluation in 2012. (2007 attainment demonstration modeling, the 2012 maintenance demonstration modeling, and additional maintenance demonstration modeling for 2017 was included as part of EAC SIP submittal, December 29, 2004.)		SCDHEC
EAC II.A.	December 2004	17. Progress report made available to EPA and public	This was addressed in correspondence sent to Mr. J. I. Palmer, EPA Region 4 Administrator on December 22, 2004.	Local Areas SCDHEC
EAC II.D.2.	**April 01, 2005**	**18. Local/State control strategies implemented no later than this date**	**Updates will be included in the June 2005 Progress Report**	**Local Areas**
EAC II.A.	June 2005	19. Progress report made available to EPA and public	Updates will be provided at the time of this milestone.	Local Areas Air Planning
EAC V.3.	**September 30, 2005**	**20. EPA takes final action on SIP submitted December 31, 2004**	**EPA Action.**	**EPA**
EAC II.A.	December 2005	21. Progress report made available to EPA and public	Updates will be provided at the time of this milestone.	Local Areas Air Planning
EAC-SIP E.2. Page 44	December 2005	22. Annual tracking of both stationary and mobile sources and a continuing planning process under the EAC. (In force unless the 8-hour ozone standard is revoked in the future or is no longer deemed the appropriate approach or the EAC process is removed.) Annual tracking for growth: 1. Annual review of growth (especially highway mobile		Emissions Inventory Air Planning

	DATE	MILESTONE	STATUS	RESPONSIBILITY
		and stationary point source) to ensure emission reduction strategies and growth assumptions are adequate. a. Stationary point sources: obligation to conduct analyses and, where indicated, adopt and implement additional control measures based on the result of the analyses, lasts throughout the maintenance period (2027). Beginning December 2005 progress report – every year the Department will evaluate the most recent annual stationary source emission inventory completed by the Department. The stationary point source emission inventory for NOx will be compared to the 1998 annual inventory used in the air quality modeling analyses for the attainment demonstration. b. Highway mobile sources: Beginning December 2005 progress report - each year the Department will evaluate the most recent annual VMT data available. The actual annual growth rate from 1998 will be compared to the average annual growth rate used in the modeling analysis from 1998 through 2007. 2. Identification and quantification of federal, state, and/or local measures indicating sufficient reduction to offset growth estimates.		
EAC-SIP E.2. Page 45	December 2005	23. Air Quality Analysis For the purposes of determining if an area has a corresponding increase in ozone, the Department will review and report each December: • Design Value Trends – Most recent design values (3 year average of the 4th highest 8-hour ozone average), compared to the trend in design values from the 1997-1999 timeframe to present. • 8-hour Ozone exceedances – Number of exceedances of the 8-hour ozone standard at each monitor in the EAC areas for the most recent ozone season, compared to the number of exceedances at each monitor from 1997 to present. • 1-hour ozone design value trends – most recent 1-hour ozone design values compared to the trend in 1-hour		Air Planning Air Laboratory

	DATE	MILESTONE	STATUS	RESPONSIBILITY
		ozone design values from the 1997-1999 timeframe to present. • 4^{th} highest value trends – 4^{th} highest 1-hour ozone value compared to the 4^{th} highest 1-hour ozone value from 1997 to present • 1-hour ozone exceedances – number of exceedances of the 1-hour ozone standard at each monitor in the EAC areas for the most recent ozone season, compared to the number of exceedances at each monitor from 1997 to present • Weather patterns – discussion of weather patterns and climatology in most recent ozone season		
EAC II.A.	**June 30, 2006**	**24. State submits progress report to EPA**	**Updates will be provided at the time of this milestone.**	Local Areas Air Planning
EAC II.A.	December 2006	25. Progress report made available to EPA and public	Updates will be provided at the time of this milestone.	Local Areas Air Planning
EAC-SIP E.2. Page 44	December 2006	26. See #22. Annual Tracking for Growth		Emissions Inventory Air Planning
EAC-SIP E.2. Page 45	December 2006	27. See #23. Air Quality Analysis		Air Planning Air Laboratory
EAC II.A.	June 2007	28. Progress report made available to EPA and public	Updates will be provided at the time of this milestone.	Local Areas Air Planning
EAC	**December 31, 2007**	**29. Attainment of the 8-hour ozone standard**	**Updates will be provided at the time of this milestone.** **EAC SIP covers attainment demonstration.**	**SCDHEC**
EAC-SIP E.2. Page 44	December 2007	30. See #22. Annual Tracking for Growth		Emissions Inventory Air Planning
EAC-SIP E.2. Page 45	December 2007	31. See #23. Air Quality Analysis		Air Planning Air Laboratory
EAC-SIP E.2. Page 46	December 2008	32. The Department completes evaluation of new emissions data.		Emissions Inventory
EAC-SIP E.2.	December 2008	33. See #22. Annual Tracking for Growth		Emissions Inventory Air Planning

	DATE	MILESTONE	STATUS	RESPONSIBILITY
Page 44				
EAC-SIP E.2. Page 45	December 2008	34. See #23. Air Quality Analysis Fourth annual tracking report is submitted and continues for each year thereafter through the end of the maintenance period. (See General Timeline Page 46)		Air Planning Air Laboratory
EAC-SIP E.2. Page 45	2008	35. Continuing Planning The larger source sectors for NO_x emissions will be covered in the annual stationary point source and highway mobile source evaluation. The Department proposed to evaluate in 2008 whether a full modeling update is needed for the EAC areas. The Department will use the full emission inventories submitted as part of the Consolidated Emissions Report Rule (CERR) process. Emissions will have been inventoried for calendar year 2005. These emissions will be used to evaluate whether a full modeling update is needed. These emissions can also be used to determine if a particular source sector is growing at a higher growth rate than previously forecast, and if so, whether contingency measures should be implemented in the even the sector began causing 8-hour ozone standard violations. The State may conduct any of the above analyses and reviews on a combined area basis as appropriate to utilize resources more effectively.		Emissions Inventory
EAC-SIP E.2. Page 44	December 2009	36. See #22. Annual Tracking for Growth		Emissions Inventory Air Planning
EAC-SIP E.2. Page 45	December 2009	37. See #23. Air Quality Analysis		Air Planning Air Laboratory
EAC-SIP E.2. Page 44	December 2010	38. See #22. Annual Tracking for Growth		Emissions Inventory Air Planning
EAC-SIP E.2. Page 45	December 2010	39. See #23. Air Quality Analysis		Air Planning Air Laboratory
EAC-SIP E.2. Page 44	December 2011	40. See #22. Annual Tracking for Growth		Emissions Inventory Air Planning
EAC-SIP E.2.	December 2011	41. See #23. Air Quality Analysis		Air Planning Air Laboratory

	DATE	MILESTONE	STATUS	RESPONSIBILITY
Page 45				
EAC-SIP E.2. Page 44	December 2012	42. See #22. Annual Tracking for Growth		Emissions Inventory Air Planning
EAC-SIP E.2. Page 45	December 2012	43. See #23. Air Quality Analysis		Air Planning Air Laboratory
EAC E.1.a.	2012	44. Mid-point evaluation (2007-2017 – 1st 10 year maintenance period) – Maintenance Demonstration Modeling	EAC SIP (December 2004) contains mid-point evaluation.	Modeling
EAC-SIP E.2. Page 44	January 2013	45. Begin emission inventory analysis work. This start date will allow the Department to use the 2010 U.S. Census information in the emission inventory development.		Emissions Inventory
EAC-SIP E.2. Page 44	December 2013	46. See #22. Annual Tracking for Growth		Emissions Inventory Air Planning
EAC-SIP E.2. Page 45	December 2013	47. See #23. Air Quality Analysis		Air Planning Air Laboratory
EAC-SIP E.2. Page 44	December 2014	48. See #22. Annual Tracking for Growth		Emissions Inventory Air Planning
EAC-SIP E.2. Page 45	December 2014	49. See #23. Air Quality Analysis		Air Planning Air Laboratory
EAC-SIP E.2. Page 44	December 2015	50. See #22. Annual Tracking for Growth		Emissions Inventory Air Planning
EAC-SIP E.2. Page 45	December 2015	51. See #23. Air Quality Analysis		Air Planning Air Laboratory
EAC-SIP E.2. Page 44	December 2015	52. Complete emission inventory analysis work and submit updated maintenance plan to the EPA.		Emissions Inventory
EAC-SIP E.2. Page 44	December 2016	53. See #22. Annual Tracking for Growth		Emissions Inventory Air Planning
EAC-SIP E.2.	December 2016	54. See #23. Air Quality Analysis		Air Planning Air Laboratory

	DATE	MILESTONE	STATUS	RESPONSIBILITY
Page 45				
EAC-SIP Page 44	2017	55. Department will update the maintenance plan 8 years after the area is redesignated to attainment. The updated maintenance plan will cover the 10 years following the expiration of the first 10-year period of the original maintenance plan (2017-2027). The Department will develop the maintenance plan for the period 2017 – 2027 on the following schedule: 1. 2013 – Begin emission inventory analysis work. This start date will allow the Department to use the 2010 U.S. Census information in the emission inventory development. 2. 2015 – Complete emission inventory analysis work and submit updated maintenance plan to the EPA.		Emissions Inventory Air Planning
EAC-SIP E.2. Page 44	December 2017	56. See #22. Annual Tracking for Growth		Emissions Inventory Air Planning
EAC-SIP E.2. *Page 45*	December 2017	57. See #23. Air Quality Analysis		Air Planning Air Laboratory
EAC E.2. Page 43	2017	58. (2007-2017) End of 1st 10 year maintenance period)	EAC SIP (December 2004) contains 1st 10 year maintenance period	SCDHEC
EAC-SIP E.2. Page 44	December 2018	59. See #22. Annual Tracking for Growth		Emissions Inventory Air Planning
EAC-SIP E.2. *Page 45*	December 2018	60. See #23. Air Quality Analysis		Air Planning Air Laboratory
EAC-SIP E.2. Page 44	December 2019	61. See #22. Annual Tracking for Growth		Emissions Inventory Air Planning
EAC-SIP E.2. *Page 45*	December 2019	62. See #23. Air Quality Analysis		Air Planning Air Laboratory
EAC-SIP E.2. Page 44	December 2020	63. See #22. Annual Tracking for Growth		Emissions Inventory Air Planning
EAC-SIP E.2.	December 2020	64. See #23. Air Quality Analysis		Air Planning Air Laboratory

	DATE	MILESTONE	STATUS	RESPONSIBILITY
Page 45				
EAC-SIP E.2. Page 44	December 2021	65. See #22. Annual Tracking for Growth		Emissions Inventory Air Planning
EAC-SIP E.2. *Page 45*	December 2021	66. See #23. Air Quality Analysis		Air Planning Air Laboratory
EAC-SIP E.2. Page 44	December 2022	67. See #22. Annual Tracking for Growth		Emissions Inventory Air Planning
EAC-SIP E.2. *Page 45*	December 2022	68. See #23. Air Quality Analysis		Air Planning Air Laboratory
EAC-SIP E.2. Page 44	December 2023	69. See #22. Annual Tracking for Growth		Emissions Inventory Air Planning
EAC-SIP E.2. *Page 45*	December 2023	70. See #23. Air Quality Analysis		Air Planning Air Laboratory
EAC-SIP E.2. Page 44	December 2024	71. See #22. Annual Tracking for Growth		Emissions Inventory Air Planning
EAC-SIP E.2. *Page 45*	December 2024	72. See #23. Air Quality Analysis		Air Planning Air Laboratory
EAC-SIP E.2. Page 44	December 2025	73. See #22. Annual Tracking for Growth		Emissions Inventory Air Planning
EAC-SIP E.2. *Page 45*	December 2025	74. See #23. Air Quality Analysis		Air Planning Air Laboratory
EAC-SIP E.2. Page 44	December 2026	75. See #22. Annual Tracking for Growth		Emissions Inventory Air Planning
EAC-SIP E.2. *Page 45*	December 2026	76. See #23. Air Quality Analysis		Air Planning Air Laboratory
EAC-SIP E.2. Page 44	December 2027	77. See #22. Annual Tracking for Growth		Emissions Inventory Air Planning

	DATE	MILESTONE	STATUS	RESPONSIBILITY
EAC-SIP E.2. *Page 45*	December 2027	78. See #23. Air Quality Analysis		Air Planning Air Laboratory
EAC-SIP	2027	79. 20-year maintenance plan and annual tracking for growth concludes. (See General Timeline Page 46)		SCDHEC

Comparison of South Carolina's Ozone Early Action Program To Traditional Federal Prescriptive Requirements

Details about the commitments can be found in the SC Ozone Early Action State Implementation Plan submitted to EPA on December 28, 2004.

SC's Ozone Early Action Program				Traditional Federal Prescriptive Requirements	
Commitment	Emissions Reduction Actual or Potential			Requirement	Emissions Reduction
	NOx	VOC	CO		
SC 61-62.5, Std. 5.2, "Control of Oxides of Nitrogen" – New State Regulation	2,913 tons*	Not avail.	Not avail.	Nonattainment New Source Review	0
SC 61-62.2, "Prohibition of Open Burning" – Modified State Regulation (PM reductions as well)	147 tons**	698 tons	Not avail.	No requirement	0
Smart Highways – Modified version of Transportation Conformity (deferred areas)	0	0	0	Transportation Conformity (No reductions)	0
Voluntary permit limit by SCE & G - Wateree (Richland County)	40% red.	0	0	No requirement	0
Voluntary permit reduction of 1,000 tons by International Paper (Richland)	0	0	0	No requirement	0
Voluntary control equipment installation at Duke Power (Anderson)	850 tons	Not avail.	Not avail.	No requirement	0
Voluntary early installation of control equipment at Transco Pipeline (Spartanburg)	2,561 tons	Not avail.	Not avail.	Eventual requirement of NOx SIP Call, Phase II	---
Truck Stop Electrification Project (Anderson) 51 spaces were outfitted with Idle Aire Technology	36.2 tons	1.84 tons	15.3 tons	No requirement	0
School Bus Retrofit Project (Anderson) Approximately 23 diesel buses will be retrofitted with particulate filters during 2006.	0	391 lbs	2,737 lbs	No requirement	0
School Bus Retrofit Project (Greenville) Approximately 47 diesel buses will be retrofitted with particulate filters during 2006.	0	799 lbs	5,593 lbs	No requirement	0
School Bus Retrofit Project (Spartanburg) Approximately 20 diesel buses will be retrofitted with particulate filters during 2006.	0	340 lbs	2,380 lbs	No requirement	0
School Bus Retrofit Project (Lexington) Approximately 28 diesel buses will be retrofitted with particulate filters during 2006.	0	476 lbs	3,332 lbs	No requirement	0
School Bus Retrofit Project (Richland) Approximately 21 diesel buses will be retrofitted particulate filters during 2006.	0	357 lbs	2,499 lbs	No requirement	0

SC's Ozone Early Action Program				Traditional Federal Prescriptive Requirements	
Commitment	Emissions Reduction Actual or Potential			Requirement	Emissions Reduction
	NOx	VOC	CO		
School Bus Retrofit Project (Richland) Approximately 21 diesel buses will be retrofitted particulate filters during 2006.	0	357 lbs	2,499 lbs	No requirement	0
School Bus Retrofit Project (York) Approximately 18 diesel buses will be retrofitted particulate filters during 2006.	0	306 lbs	2,142 lbs	No requirement	0
Gas Can Exchange Events (Georgetown)	0	334 lbs	0	No requirement	0
Gas Can Exchange Events (Greenville)	0	711 lbs	0	No requirement	0
Gas Can Exchange Events (Greenwood)	0	334 lbs	0	No requirement	0
Gas Can Exchange Events (Lexington)	0	348 lbs	0	No requirement	0
Gas Can Exchange Events (Richland)	0	475 lbs	0	No requirement	0
Improvements to Park and Ride lot at Highway 378 and I-20 (Lexington)	476 lbs	924 lbs	7,297 lbs	No requirement	0
Conversion of Commercial Vehicle Fleet to Propane – (Lexington)	1,638 lbs	1,300 lbs	8,244 lbs	No requirement	0
Biodiesel Buses, University of South Carolina. (Richland)	25 lbs	12 lbs	34 lbs	No requirement	0
University of South Carolina Ethanol Project (Richland)	18 lbs	19 lbs	1,250 lbs	No requirement	0
Take a Break from the Exhaust program (Lexington, Newberry, Kershaw, and Richland)	393 lbs	568 lbs	5,494 lbs	No requirement	0
SCDHEC has a number of flex fuel vehicles that run almost exclusively on E85. (Richland)	103 lbs	104 lbs	6,030 lbs	No requirement	0
Ethanol (E85) refueling station for public (Richland)	621 lbs	162 lbs	2,369 lbs	No requirement	0
Smart Ride – Mass Transit Program (Lexington, Newberry, Kershaw, and Richland)	207 lbs	153 lbs	3,166 lbs	No requirement	0
Totals from SC's Ozone Early Action Program	**6,522 Tons**	**703 Tons**	**37 Tons**	**Total from Traditional Federal Prescriptive Requirements**	**0**

* Potential reductions

**The anticipated reductions noted here are from the ban imposed on the burning of residential construction waste only. Further reductions are expected to result from other revisions to the Open Burning regulation that are more difficult to quantify. For instance, the burning of household trash generates 2,379 tons of NOx and 11,896 tons of VOCs annually. The revision to the regulation that occurred through this process closed a loophole that had allowed household trash to be burned under certain circumstances. While it is not clear the exact amount of reductions that will result from this revision, it is certain that additional reductions in both NOx and VOCs will occur.